DOCUMENT RESUME

ED 456 158 TM 033 221

AUTHOR Hansen, Joseph Wm.
TITLE Review of Empirical Research That Utilized the Bell Object Relations Inventory.
PUB DATE 2001-05-00
NOTE 66p.; Doctoral Research Paper, Biola University.
PUB TYPE Dissertations/Theses (040)
EDRS PRICE MF01/PC03 Plus Postage.
DESCRIPTORS *Diagnostic Tests; *Family Characteristics; Interpersonal Relationship; *Measures (Individuals); *Psychopathology; Religion; Research Reports; *Test Use
IDENTIFIERS *Object Relations

ABSTRACT

This literature review examines how the Bell Object Relations Inventory (BORI) (M. Bell and others, 1986) has been used in the literature. General domains of BORI use include interpersonal relatedness, the measurement of religious dimensions, and the diagnosis and prediction of psychopathology. Specific areas are reviewed regarding the applicability of the BORI to familial role assessment, spiritual maturity, interfaith compassion, and birth order. Other areas in this review include how object relations deficits contribute to schizophrenia, borderline personality disorder, nonpsychotic distress and trauma, and eating disorders. Review of the literature shows the BORI to be a reliable and valid instrument. It demonstrates a significant relationship with familial roles and patterns. It is effective in assessing spiritual maturity and in distinguishing subgroups of schizophrenia. It also shows discriminant validity between borderline and nonborderline patients and is a useful measure of ego function deficits as they relate to bulimic women. (Contains 24 references.) (Author/SLD)

Reproductions supplied by EDRS are the best that can be made
from the original document.

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)
This document has been reproduced as received from the person or organization originating it.
Minor changes have been made to improve reproduction quality.
Points of view or opinions stated in this document do not necessarily represent official OERI position or policy.

PERMISSION TO REPRODUCE AND DISSEMINATE THIS MATERIAL HAS BEEN GRANTED BY

Joseph Hansen

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

ED 456 158

REVIEW OF EMPIRICAL RESEARCH THAT UTILIZED THE BELL OBJECT RELATIONS INVENTORY

A Doctoral Research Paper

Presented to

the Faculty of the Rosemead School of Psychology

Biola University

In Partial Fulfillment

of the Requirements for the Degree

Doctor of Psychology

---

by

Joseph Wm. Hansen

August, 2002

TM033221

BEST COPY AVAILABLE

REVIEW OF EMPIRICAL RESEARCH THAT UTILIZED

THE BELL OBJECT RELATIONS INVENTORY

by

Joseph Wm. Hansen

APPROVED:

Joan W. Jones, PsyD — Date 5/2/01

Patricia L. Pike, PhD — Date 5/2/01

APPROVED:

Patricia L. Pike, PhD, Dean

5/2/01
Date

Copyright © 2002 by Joseph Wm. Hansen

ABSTRACT

REVIEW OF EMPIRICAL RESEARCH THAT UTILIZED

THE BELL OBJECT RELATIONS INVENTORY

by

Joseph Wm. Hansen

The present literature review examines how the Bell Object Relations Inventory (BORI) has been used in the literature. General domains of the BORI's usage include interpersonal relatedness, the measurement of religious dimensions, and the diagnosis and prediction of psychopathology. Specific areas are covered regarding the BORI's applicability to familial role assessment, spiritual maturity, interfaith comparison, and birth order. Other particular areas in this review include how object relations deficits contribute to schizophrenia, borderline personality disorder, non-psychotic distress and trauma, and eating disorders. Review of the literature showed the BORI to be a reliable and valid instrument. It demonstrated a significant relationship to familial roles and behavior patterns. It was effective in assessing spiritual maturity and in distinguishing subgroups of schizophrenia. It showed discriminant validity between borderline and non-borderline patients. It also proved a useful measure of ego function deficits as they relate to bulimic women.

TABLE OF CONTENTS

PAGE

LIST OF TABLES vi

ACKNOWLEDGEMENTS vii

DOCTORAL RESEARCH PAPER

Introduction 1

Development of Revised BORI 3

The BORI and Interpersonal Relatedness 9

The Rorschach, Interpersonal Relatedness, and Object Representation 10

The Self—Family Organization, Interpersonal Attachment, and Identity 12

The BORI and the Measurement of Religious Dimensions 15

Development of the SAI 16

Spiritual Maturity and Object Relations Development 18

Comparison of Jewish, Muslim, and Protestant Faith Groups 20

Birth Order, Religious Experience, and Object Relations Functioning 23

The BORI as Diagnostic and Predictive of Pathology 27

Object Relations Deficits and Psychosis/Schizophrenia 27

Object Relations Deficits and BPD 30

PAGE

Object relations deficits and BPD vs. other diagnostic groups 30

Comparison of the BORI with the PAI and the MPD 31

Non-Psychotic Distress and Trauma 34

Effect of early life experiences on psychosocial distress 34

Childhood maltreatment and suicidal behavior in women 36

Object relations and response to sexual assault 38

Impulse Difficulties/Eating Disorders 40

Object relations deficits in bulimic college women 40

Object relations and social cognitive correlates of eating disorder 42

Conclusion and Suggestions for Future Research 45

REFERENCES 53

LIST OF TABLES

PAGE

Table 1. Correlations Between BORI and SRIn Subscales 19

ACKNOWLEDGEMENTS

For the completion of this doctoral paper, I would like to thank Drs. Joan Jones and Pat Pike. Both agreed on comparatively short notice to read for this project, which they undertook with diligence—primarily during the summer months when their time for themselves and their families is certainly valuable. Their modifications and corrections assisted me a great deal. And their encouraging comments went a long way in motivating me to finish strong and quickly.

For this doctoral paper in particular but especially for the experience at Rosemead in general, I wish to thank two persons. Unquestionably there are numerous others who have made my Rosemead experience far richer and more meaningful than it would have otherwise been, but I wish to confine my thanks to those two persons without whom Rosemead would not have been possible.

To my wonderful wife, Natalie, whose love, encouragement, and support have shaped me beyond measure. I suppose I could have endured the Rosemead program were it not for you. But I surely could not have known the Rosemead experience—complete with its offers for suffering and maturity to those who accept—were it not for you. Your companionship has proved steadfast and sure, through even the stormiest times. You love me. Every day I believe that a little more and understand it a little better. Thank you.

To my Heavenly Father, who has done for me "immeasurably more" than I "could ask or imagine." I am reminded of a friend's comments. Making sport of those worship leaders who oft exclaim, "Let's give God a great, big round of applause," she quips, "When do you stop?" Father, you have truly done for me more than I could ask or imagine, perhaps more than I would ask or imagine. Throughout my time at Rosemead, you have proved true in your commitment to my sanctification. Your love and training have given strength and direction to legs otherwise weak and prone to wander. I can say with confidence that, because of you, I am a better man for the Rosemead experience.

REVIEW OF EMPIRICAL RESEARCH THAT UTILIZED THE BELL OBJECT RELATIONS INVENTORY

Introduction

Much of today's mental health environment insists, more than ever before, upon empirically demonstrable psychotherapies. Models of psychotherapy that readily lend themselves to empirical study are typically those which focus upon symptom improvement.

Models of psychotherapy that focus not merely on symptom reduction but on deeper personality change do not easily lend themselves to empirical analysis. The nature of change involved is relational and growth oriented. This growth is less apparent to observers and from self-reports based upon narrow criteria that lend themselves to simple empirical verification. Growth is more apparent to the clients themselves and also to those with whom they interact on a more intimate level. One such model is object relations psychotherapy.

According to Feist and Feist (1998), however, "[object relations] theory does not lend itself to falsifications because it generates very few testable hypotheses" (p. 151). In other words, many object relations' postulates are difficult to support empirically. Not only is there no objective observer present to

verify or falsify; but also, due to the highly individual nature of psychotherapeutic encounters, results are frequently not replicable. Moreover, as Jones and Butman (1991) stated, "because all knowledge of internal dynamics comes from the [object relations] therapy process, in which the therapist is intimately involved, all conclusions are subject to the interpretations and distortions of the therapist" (p. 114).

This writer was interested in reviewing research on an instrument designed to provide empirical support for object relations theory: the Bell Object Relations Inventory (BORI). In a review of current self-report measures, Lyddon, Bradford, and Nelson (1993) indicated the BORI to have a high degree of discriminant and concurrent validity, "based on its ability to (a) discriminate previously identified clinical populations and (b) correlate positively with various measures of pathology" (p. 393).

Review of the literature showed plainly that the BORI is useful as a measure of interpersonal relatedness, religious functioning, and psychopathology. This writer intends to show how the BORI has been used in the literature. The following are an introduction to the BORI and a review of the empirical studies which utilized it. The review will begin with those studies that employed the BORI as a measure of interpersonal relatedness. It will then cover research that used the BORI in the measurement of religious experience, development, and

object relations maturity or functioning. The review will conclude with those studies wherein the BORI was used to diagnose and predict varying degrees of psychopathology. Following the review will be a discussion of other areas wherein the BORI might be useful.

Development of Revised BORI

In an effort to provide empirical support for object relations theory, Bell, Metcalf, and Ryan (Bell, 1995; Bell, Billington, & Becker, 1986) developed the forerunner of the BORI in 1979. This writer contacted Dr. Morris Bell regarding the 1979 and 1980 unpublished manuscripts. Dr. Bell indicated those manuscripts to be no longer available. He kindly pointed this author to other resources that would provide the required information for this project. These investigators sought to produce a self-report inventory that would describe the quality of the internal object world of respondents. They worked from the rationale that the ego function of self-object representations "can be discerned from the way an individual conducts his relationships and the way he experiences himself in relation to others" (Bell et al., 1986, p. 734).

The forerunner to the BORI was a true/false self-report questionnaire that dealt with one's experience of relationships and one's characteristic pattern of relating. The forerunner, however, produced only a single object relations score.

Understanding object relations to be a multidimensional construct, Bell et al. (1986) sought "an underlying empirical structure for object relations functioning" (p. 734) which might emerge from factor analysis of the early version of the BORI. This factor analysis produced what is now the revised BORI.

The revised BORI remains a true/false self-report questionnaire, and its questions deal with the same matters. Unlike its forerunner, however, the revised BORI (a) was standardized on both nonclinical and clinical samples (including undergraduate students, community active adults, and psychiatric outpatients and inpatients), and (b) yields four susbscales, factorially derived, rather than a single object relations score (Lyddon et al., 1993).

Factor analysis yielded dimensions of the BORI that represent an underlying and consensually agreeable empirical structure for object relations functioning (Bell et al., 1986). This agreeable structure was necessary, for an obstacle to empirical investigation of object relations theory has been the discrepancy among theorists regarding various tenets of object relations theory (Bell et al., 1986; Feist & Feist, 1998; Smithson & Howard, 1973). As Bell et al. (1986) pointed out, however, there are fundamental areas of agreement among object relations theorists that serve as bases for collective understanding: namely, "that personality develops from experiences in early childhood relationships that produce internal self-other representations. These serve as templates for

contemporary experience…[and with normal development] would grow more complex, differentiated, and flexible" (p. 733).

Conversely, psychopathology is effected by arrested development along this pattern of growth. Examples of resulting psychopathological conditions include narcissistic and borderline personality disorders, schizophrenia, and depression. Bell et al. (1986) hypothesized that underlying such psychopathologies are certain traits. for which factor analysis suggested four groupings. These four groupings, or subscales, are Alienation, Insecure Attachment, Egocentricity, and Social Incompetence. Consistent with object relations theory, elevations on each scale are understood as basic styles of relating that stem from developmental failures in early childhood. As their names imply, these subscales necessarily measure certain manifestations of psychopathology. Bell (1995) and Bell et al. (1986) made no mention of low scores on each scale indicating health or absence of psychopathology, because the BORI was not designed as a measure of health.

The aforementioned factor analysis run by Bell et al. (1986) utilized the forerunner of the BORI. In that initial factor analysis (Bell, 1995; Bell et al., 1986), participants completed 55 object relations items. The same study included a replication factor analysis that used the revised BORI, which included 45 of the original 55 object relations items. Participants from the first factor analysis

represented seven subpopulations, in order to include a wide variety of ego functioning.

A participant pool of 302 included community active adults, undergraduate students, and psychiatric inpatients and outpatients, some of whom were diagnosed with borderline personality disorder. These outpatients were part of another published study on the reliability of diagnostic procedures. Subjects were nearly equally divided between gender (160 men; 142 women). Eighty percent were between 20 and 40 years of age ($\underline{M}$ = 30.59; $\underline{SD}$ = 10.8); the age range of community active adults was between 19 and 79 ($\underline{M}$ = 38.47); and students ranged in age from 18 to 48 ($\underline{M}$ = 25.86). Outpatients, borderline patients, and inpatients were similar in age ($31.5 < \underline{M} < 32.9$; Bell et al., 1986).

Age and gender distribution of replication groups were equivalent to those of the original sample. The replication subject pool ($\underline{N}$ = 613) was much larger than the original pool. New subjects included 482 undergraduates from a large Midwestern university and 131 psychiatric inpatients from the same hospital as those in the original sample (Bell et al., 1986).

The BORI was administered along with other instruments (e.g., Brief Psychiatric Rating Scale, Global Assessment Scale, and Schedule for Affective Disorders and Schizophrenia) that identified pathology. The 55 object relations item version was given to the first sample. Subsequent to the first analysis,

Varimax and oblique rotations were run. Varimax rotations identified nine, five, four, and three factors, whereas oblique rotation identified four factors and 10 items with low factor loadings. According to the authors, the oblique four-factor solution accounted for 3% more variance, for a total of 28.7%, than did the Varimax four-factor solution. In addition, the oblique four-factor solution increased the loadings of various items and increased the correlations among factors. The 10 items with low factor loadings were removed, producing the current 45 item BORI, the version subsequently given to the replication sample (Bell, 1995).

High loading factor items suggested these four subscale names, followed by their respective eigenvalues: Factor 1, Alienation (ALN; 8.98); Factor 2, Insecure Attachment (IA; 1.68); Factor 3, Egocentricity (EGC; 1.31); and Factor 4, Social Incompetence (SI; .94). Persons who score high on ALN often have a basic lack of trust in relationship. Relationships for these individuals are typically unstable and reflect severe difficulties with intimacy. Relationships that do exist are usually superficial. Individuals with high scores on ALN may be suspicious and guarded. They may isolate themselves as a protection against the anger and hostility they project onto others (Bell, 1995).

Those who score high on IA tend to be sensitive to rejection and easily hurt by others. Separation, loss, and real or imagined abandonment are intolerable for

these individuals. Relationships are seen as important, but these relationships are typically governed by worry, guilt, jealousy, and anxiety, which often lead to maladaptive patterns and sadomasochistic binds (Bell, 1995).

High scorers on EGC tend to mistrust others' motivations. They view others as revolving around them and as people to be manipulated for self-gain. These individuals manifest no true empathy, for they have no real awareness of or concern for what others are feeling (Bell, 1995).

Elevations on SI reflect shyness, nervousness, and uncertainty around others—especially members of the opposite sex. For persons who score high on SI, relationships are often seen as extremely difficult and unpredictable, and hence too much work. These individuals often avoid the anxiety they believe is inherent to relationship by escaping from social interaction altogether (Bell, 1995).

When factor loadings of the replication sample were compared with those of the first sample, similarity coefficients for factors 1 through 4 were .97, .90, .84, and .93, respectively. The authors report that these values are greater than five standard deviations beyond chance values (Bell, 1995; Bell et al., 1986). Additionally, Pearson correlations for each respondent between original and replication factor structures were, for factors 1 through 4, .98, .96, .87, and .97, respectively (Bell, 1995).

Though Bell et al. (1986) intended their study as an introduction to the BORI in terms of its reliability, validity, and factorial invariance, it yielded significant results as regards the prediction of psychopathology. Post hoc comparisons of means of the seven criterion groups in the first sample show considerable variation among these groups. On ALN, borderline patients scored the highest ($\underline{M}$ = 1.22); on IA, borderlines ($\underline{M}$ = .85) and other AXIS II diagnosed patients ($\underline{M}$ = .50) scored highest, though schizophrenic patients had very low scores ($\underline{M}$ = -.33); on EGC, borderline ($\underline{M}$ = .68), mixed ($\underline{M}$ = .43), and schizophrenic patients ($\underline{M}$ = .30) scored highest; and pathological groups were indistinguishable on SI. Each of these comparisons was significant at the .05 level. (Bell, 1995; Bell et al., 1986).

The BORI and Interpersonal Relatedness

Any measure of object relations functioning must naturally be effective in assessing the quality of interpersonal relatedness. As stated above, though object relations has to do with the internal object world of persons, the ego function of self-object representations "can be discerned from the way an individual conducts his relationships and the way he experiences himself in relation to others" (Bell et al., 1986, p. 734).

The Rorschach, Interpersonal Relatedness, and Object Representation

Burns and Viglione (1996, 1997) showed the BORI's usefulness in assessing "various domains of interpersonal relatedness from different points of view" (1996, p. 94). Interestingly, Burns and Viglione (1996, 1997) created a modified version of the BORI, what they termed the SBORI, for use by spouses. The SBORI was modified by changing the items "from first person to third person," thus further demonstrating the BORI's utility and flexibility as a valid and reliable research instrument. (The change was not actually "from first person to third person"; instead, the questionnaire remained in first person, though with an "other" rather than "self" focus; e.g., "The item 'It is hard for me to get close to anyone' was changed to 'It is hard for my wife to get close to anyone'" [1996, p. 95].)

The participant pool began with 167 nonpatient women, 18 years of age and older, and was eventually limited to 70 women in order to maximize between group variance. These 70 women were then equally divided into two groups: high interpersonal relatedness and low interpersonal relatedness. Because interpersonal relatedness was a dichotomous variable (i.e., high or low), logistic regression analysis was used (Burns & Viglione, 1996, 1997).

Specific, interpersonal behaviors, such as awareness, relating, and competence, were measured using the Emotional Maturity Rating Form. Level of

interpersonal functioning and general interpersonal attitude was measured using the Rorschach and the overall composite score of the BORI (Burns & Viglione, 1996, 1997).

Burns and Viglione (1996, 1997) found that the quality of interpersonal relatedness, as measured by the BORI, is related to Rorschach responses which have to do with human representations. The "relative number of accurate, popular, whole, benevolent cooperative, realistic, and logical Rorschach human representations" (1996, p. 97) was found to be predictive of high interpersonal relatedness. Conversely, "the number of distorted, partial, damaged, aggressive, imaginary, and confused human representations" (1996, p. 97) was found to be predictive of low interpersonal relatedness.

Given Burns and Viglione's (1996, 1997) Human Experience Variable and its power in predicting level of interpersonal relatedness, this writer wonders whether the inverse is true: namely, might the overall composite score of the BORI be predictive of pathological human representation Rorschach responses? In any case, based upon Burns and Viglione's (1996, 1997) study, the BORI appears to be useful in the cross-validation of Rorschach data having to do with interpersonal relatedness.

The Self—Family Organization, Interpersonal Attachment, and Identity

Deason (1998) employed 114 participants (33 men; 78 women; and 3 who did not specify gender) as he investigated the relationships among family role behavior and family functioning, interpersonal attachment, and gender. Data were analyzed with canonical analysis. The Children's Role Inventory was used to measure family role behavior, defined as a "a set of specific duties and roles [one] is expected to fulfill in order to maintain the equilibrium of the family system" (p. 466). Four distinct "family roles" emerged: Hero, Scapegoat, Mascot, and Lost Child.

According to Deason (1998), the hero is often the eldest child. This child compensates for familial problems by being overly responsible, perfectionistic, and compulsive. The hero typically sets unusually high expectations for himself, and so attempts to mask the internal problems of his family with his own accomplishments.

The scapegoat bears the brunt of her family's problems. This child is blamed for virtually everything that goes wrong, leading her to internalize the blame. This internalization of blame consequently leads her to engage in self-destructive behaviors, such as drug use, promiscuity, running away, and delinquency. According to Deason (1998), the scapegoat's apparent anger and hostility mask the hurt and rejection suffered at the hands of her family.

The mascot is often the youngest child in the family. Deason (1998) stated, "the mascot redirects the energy of the family away from the problems by the use of humor or clowning behaviors" (p. 466). Later in life, the mascot typically suffers from superficial relationships due to his inability openly to express "negative" emotions.

Finally, there is the lost child. Lost children are often the middle children of their respective families. Whereas the hero is usually the eldest and the mascot the youngest, the lost child is usually somewhere in the middle. She does not fit in, and so is confused as to her functioning in the family, because no one has provided her with an explanation of how to exist in the family system (Deason, 1998).

Deason (1998) used the BORI to measure interpersonal attachment. He found one canonical function that significantly related such familial roles to characteristics of interpersonal attachment and family functioning. Specifically, ALN accounted for the most variance of this canonical factor, followed by SI and IA. Deason wrote that high ALN scorers have characteristics that influence role behavior. This influence "can be seen in that the hero and mascot roles include socially rewarding modes of interpersonal interaction, while scapegoat and lost child roles carry socially punished modes of interpersonal interaction" (p. 470). Furthermore,

> the fact that ALN accounted for the greatest degree of variability in the canonical function is in accord with the findings that Heros and Mascots have a greater social support system and more positive social interactions than do Scapegoats and Lost Children. (p. 471)

In other words, Deason found significant negative correlations between ALN and Heros ($r = -.46$, $p < .05$) and between ALN and Mascots ($r = -.43$, $p < .05$), though he found significant positive correlations between ALN and Scapegoats ($r = .33$, $p < .05$) and ALN and Lost Children ($r = .64$, $p < .05$). In addition, IA and SI significantly correlated with Lost Children (IA, $r = .50$; SI, $r = .62$; $p < .05$). These findings indicate that the BORI, specifically the ALN subscale, has a significant relationship with these familial roles and behavior patterns.

These familial roles and behavior patterns are similar to the roles and patterns conceptualized in object relations theory in that they deal with the "working models of self and others" (Deason, 1998, p. 465) developed in early interpersonal experiences and how these experiences are organized into a cooperative, coherent system. Although a measure of object relations, the BORI was shown by Deason to be useful as a measure of familial roles and behavior patterns.

As stated at the beginning of this section, any measure of object relations functioning must naturally be effective in assessing the quality of interpersonal

relatedness. Burns and Viglione (1996, 1997) showed the BORI useful as a measure against which to cross-validate Rorschach data, specifically those Rorschach responses having to do with human representations. Furthermore, Deason (1998) showed the BORI to correlate highly with established family roles, thus demonstrating the BORI to be an effective measure of familial attachment and behavior patterns.

The BORI and the Measurement of Religious Dimensions

The BORI's versatility is further demonstrated in the following studies. As was shown above, the BORI is helpful in assessing interpersonal relatedness. Human beings, however, relate to Someone else as well, not merely to one another. They relate to God (Hall & Edwards, 1996). Benner (1988) asserted that persons relate to God using the same psychological mechanisms used when relating to other persons. Based on this concept, researchers have used the BORI to provide data that parallel both personal and spiritual relationships. These data would thus be useful in the empirical investigation of this facet of human experience.

Development of the SAI

Hall and Edwards (1996) utilized the BORI as a measure of object relations against which to test the construct validity of their newly developed Spiritual Assessment Inventory (SAI). Their study was based on two different samples. Participants in the first sample included 193 undergraduates from a southern California university; participants in the second sample included 470 subjects from two southern California universities. Age, gender, and other demographic data were not reported.

The SAI includes two dimensions (Quality of relationship with God and Awareness of God's presence) and five factors (Instability, Defensiveness, Awareness, Realistic Acceptance, and Grandiosity). Instability, Realistic Acceptance, and Grandiosity are subsumed under the Quality dimension, and Defensiveness and Awareness under the Awareness dimension. All four BORI factors had significant, positive correlations with the Instability factor of the SAI (ALN, $r = .43$; IA, $r = .38$; EGC, $r = .31$; and SI, $r = .19$; all p's $< .05$). According to Hall and Edwards (1996), this result was expected, because the Quality construct (which includes Instability) involves components "derived from an object relations developmental perspective" (p. 244). Furthermore, the "Quality dimension...is more related to psychological maturity than is Awareness" (p. 244). In other words, because the Quality dimension (i.e., Instability) reflects one's

psychological maturity and Awareness reflects one's spiritual maturity, a higher correlation was expected between the BORI and Instability than between the BORI and Awareness.

In addition, ALN had significant, negative correlations with Awareness (r = -.38) and Realistic Acceptance (r = -.36); EGC had a significant, negative correlation with Realistic Acceptance (r = -.22); IA also had a significant, negative correlation with Realistic Acceptance (r = -.21); and SI had a significant, negative correlation with Awareness (r = -.23).

The use of the BORI in this context shows its utility in discerning relational styles, not just among human beings, but also the human experience of relationship between self and God. The BORI was shown by Hall and Edwards (1996) to be useful in discriminating among relational constructs having to do with God. "The correlations of the SAI subscales with the BORI provides some support for the distinction between Awareness [of God's presence] and Quality [of relationship with God]" (p. 244).

The BORI's usefulness in discriminating among relational constructs having to do with God could prove beneficial in the context of Christian based psychotherapy or spiritual direction. One's relationship with God is influential in all areas of life, especially those areas having to do with relationship. Better insight into one's style of relating to God might help to improve that relationship.

Moreover, because the same psychological processes are likely at work in relationship with God and in relationship with other persons, that insight might help to improve one's relationships to others. In addition, use of the BORI in this context may be helpful to the numerous psychotherapists better trained to deal with object relations constructs than with spiritual constructs.

Spiritual Maturity and Object Relations Development

Hall, Brokaw, Edwards, and Pike (1998) examined religious functioning from an object relations perspective. Participants included 26 persons from a spiritual direction training program, 39 undergraduate psychology students, and 11 outpatient clients, for a total of 79. Subjects ranged in age from 18 to 70 (M = 33) and were unequally divided with respect to gender (49 women; 25 men) and race (53% Caucasian; 11.8% Asian/Pacific Islander; 5.3% "other"; 4% Latino/Mexican American; and 1.3% American Indian or Alaska Native).

The BORI, the Spiritual Assessment Inventory (SAI), and the Religious Status Inventory (RSIn) were used to test the following hypotheses: (a) "Spiritual maturity, as measured by three of the [RSIn] subscales, is positively associated with level of object relations as measured by the four [BORI] subscales" (Hall et al., 1998, p. 305); and (b) "Both the quality of relationship and awareness aspects of spiritual maturity, as measured by the SAI Quality and Awareness subscales are positively associated with the four BORI subscales" (p. 305).

Hypothesis (a) was supported (see Table 1). The 12 possible correlations among the BORI and RSIn subscales were significant at $p < .05$. These correlations are in the negative direction due to the manner in which the BORI is scored; that is, a high score indicates less mature object relations development. Particular strength is noted in the correlations of the ALN and IA subscales with the RSIn subscales. All six of these correlations were significant at the .001 level.

Table 1

Correlations Between BORI and RSIn Subscales*

	RSIn Scales		
BORI Scales	Worship	Involvement	Fellowship
ALN (alienation)	-.48	-.46	-.45
EGC (egocentricity)	-.33	-.35	-.26
IA (insecure attachment)	-.48	-.45	-.40
SI (social incompetence)	-.26	-.20	-.29

* From Hall et al. (1998); all p's < .05.

Hypothesis (b) was supported, though not in full. Only three of the BORI subscales (ALN, EGC, and IA) significantly correlated with the Awareness subscale of the SAI, whereas all four BORI subscales significantly correlated with the Quality subscale of the SAI. Using t-tests, Hall et al. (1998) showed three BORI subscales to correlate to a significantly greater degree with Quality than with Awareness: ALN, $t = 3.10$; IA, $t = 1.86$; and SI, $t = 5.58$; all p's $< .05$.

This study shows the BORI to be extremely helpful in measuring a link between religious and psychological functioning. The BORI proved strongest in its correlation with the Quality of relationship with God. Although three BORI subscales significantly correlated with the capacity to be aware of God, these correlations were substantially lower than those having to do with quality of relationship. According to Hall et al. (1998), because psychological maturity, as measured by the BORI, is only moderately related to awareness of God's presence and movement in one's life, this awareness "must be more fully developed through spiritual disciplines" (p. 310).

Comparison of Jewish, Muslim, and Protestant Faith Groups

Tisdale (1997) investigated the relationship between level of object relations development and experience of self and God. There were 150 subjects, and they were equally divided among Jewish, Muslim, and Protestant faith. Subjects were undergraduate students at UCLA. Instruments included the

following: the BORI, the Tennessee Self Concept Scale, the Gorsuch Adjective Checklist, the Loving and Controlling God Scales, the Spiritual Assessment Inventory, and the Religious Experience Questionnaire.

Tisdale (1997) hypothesized that within each group there would be significant correlations between level of object relations development and experience of God; that no significant difference among groups would exist as regards level of object relations development; and that there would be significant differences among the groups as regards how they experience God. All three hypotheses were supported.

The BORI was correlated with measures of experience of God and self for each group. It appears the BORI is useful in capturing unique qualities found in varied religious/cultural traditions. For example, Tisdale (1997) found that for Protestants all four BORI subscales "have an equal level of relatedness with how this group experiences God and self" (p. 153). "For the Cultural Jews, [SI] seems to have the strongest connection with experience of self and God, though other BORI subscales also correlate with some aspects of experience of God" (p. 153). No clear patterns were displayed for Observant Jews. "For Muslim subjects, [IA and EGC] appear to have the strongest correlation with experience of self and God" (p. 153).

"The correlation between [ALN] and seeing God as Deistic (GAC) was particularly robust for the Protestants" (Tisdale, 1997, p. 154). Deisticness is a factor from the Gorsuch Adjective Checklist, and it refers to the view that God is powerful and transcendent, though distant and impersonal. Also, Protestants were higher than Jews and Muslims on the negative correlation of ALN and viewing God as loving, as measured by the Loving and Controlling God Scales.

Protestants showed a significantly higher negative correlation between IA and rating God as Benevolent and with Awareness of God. Observant Jews were significantly higher on the correlation between IA and extrinsic-personal religious orientation, as measured by the Religious Experience Questionnaire. Cultural Jews were significantly higher than the other three groups on the negative correlation between SI and Omni-ness, the Gorsuch Adjective Checklist factor that refers to God's all-knowing and ever-present nature. The Muslim group had much stronger correlations between EGC and experience of God (Tisdale, 1997).

These results demonstrate the utility of the BORI in measuring the associations between object relations development and understanding of God. In particular, the BORI appears to have been useful in differentiating relational patterns, personal experience, and expectations of God from one faith group to the next. Across these groups, persons differed on their BORI scores and their measured experience of God. Interpretation of these God image differences is

beyond the scope of this paper, though further research into this area would be interesting and valuable.

Birth Order, Religious Experience, and Object Relations Functioning

Peterson (1999) investigated the relationship of birth order to God image and object relations functioning. His aim was to discover whether significant correlations, previously found between God image and object relations functioning, would differ depending on birth order. The sample (N = 149; M age = 18.93) of undergraduate students from a small, private, Christian university was divided into two groups: firstborns (n = 82) and laterborns (n = 67). The sample was unequally divided with respect to gender (92 women; 57 men) and race (85.2% White; .7% Black; 4.7% Hispanic/Latino; and .7% Native American).

Instrumentation included the God Image Scales (GIS), the Gorsuch Adjective Checklist (GAC), the Loving and Controlling God Scale (LCGC), the SAI, the Religious Status Inventory (RSIn), the BORI, and the Forgiveness of Other and Forgiveness of Self Scale (FOFS). One additional instrument, the Experience of God Scale (EGS), was introduced for initial analysis.

The z-test comparisons between SI (erroneously defined in this study as Social Isolation rather than as Social Incompetence) and the Controlling subscale of the LCGC revealed a significant positive correlation in firstborns, (r = .217), and a significant negative correlation in laterborns, (r = -.416). The Controlling

subscale includes such adjectives as rigid, demanding, strict, controlling, and restricting. For firstborns, viewing God in this way appears to result in greater social incompetence; interestingly, for laterborns the opposite seems true. The higher their scores on Controlling, the lower their scores on SI. Deason (1998) offers this explanation:

> For firstborns, who are typically more sensitive to rejection and more in need of connection with a nurturing and accepting authority figure than [are] laterborns, it is logical that an image of a controlling God would be more strongly associated with social isolation than in laterborns. An explanation for a negative correlation in laterborns between Controlling and Social Isolation [sic] is not readily accessible from the literature. (pp. 169-170)

Also compared were scores on EGC and positive aspects of God image in firstborns and laterborns. Peterson (1999) found the following:

> Negative correlations that were significantly stronger for firstborns were found between Egocentricity and three RSIn variables: Leadership (firstborn $\underline{r}$ = -.538, laterborn $\underline{r}$ = -.141, $\underline{z}$ = 2.30), Fellowship (firstborn $\underline{r}$ = -.474, laterborn $\underline{r}$ = -.093, $\underline{z}$ = 2.12), and Openness (firstborn $\underline{r}$ = -.543, laterborn $\underline{r}$ = -.145, $\underline{z}$ = 2.30). (pp. 163-164)

These findings indicate that, as level of EGC increases, positive belief and religious participation in the community decrease, for firstborns more than laterborns.

These findings are to be expected. That self-centered individuals are not outwardly focused is axiomatic. That the BORI can detect this, however, further reflects its usefulness in general, and further validates the EGC construct in particular. Peterson (1999) only lightly touched on how birth order interacts with EGC in religious functioning. He mentioned research which shows that firstborns are typically more self-focused than laterborns. From this research he hypothesized that EGC might play a significant part in God image for firstborns because they are forced to struggle with this propensity more than laterborns in maintaining a sound and healthy view of God and the community of believers.

EGC was found to correlate, in another instance, more significantly for laterborns than for firstborns. A positive correlation existed between BORI scales EGC and IA (firstborn $\underline{r} = .335$, laterborn $\underline{r} = .686$, $\underline{z} = 2.91$); and a negative correlation existed between EGC and the Forgiveness of Self subscale of the FOFs (firstborn $\underline{r} = -.193$, laterborn $\underline{r} = -.574$, $\underline{z} = 2.62$). With laterborns, to a greater degree than with firstborns, as levels of manipulation and mistrust increase, so do worry, jealousy, and guilt concerning relationships increase. Moreover, it was

demonstrated that laterborns with lower levels of EGC reported a heightened capacity to forgive themselves (Peterson, 1999).

In this section, The BORI was shown to provide data that parallel both personal and spiritual relationships. Hall and Edwards (1996) demonstrated the BORI's utility in discerning relational styles between human beings and God and its usefulness in discriminating among relational constructs having to do with God. Hall et al. (1998) examined religious functioning from an object relations perspective and found the BORI to be helpful in mediating a link between religious and psychological functioning. They found the BORI to be strongest in its association to Quality of relationship with God, the variable having to do with psychological maturity. Tisdale (1997) investigated the relationship between level of object relations development and experience of self and God, and found the BORI to be useful in differentiating relational patterns, personal experience, and expectations of God from one faith group to the next. Finally, Peterson (1999) researched the relationship of birth order to God image and object relations functioning, and found relationships between BORI factors and religious involvement to differ between firstborns and laterborns.

The BORI as Diagnostic and Predictive of Pathology

Object relations therapists believe in the primacy of internal self-object representations (Cashdan, 1988; Hamilton, 1990). An understanding of how these representations contribute to both health and pathology is key to object relations psychotherapy. Unfortunately, however, there are few reliable instruments available which measure the influence of object relations in psychopathology. The BORI does just that. It measures not only the influence of object relations in psychopathology, it shows itself an arguably useful tool for diagnosis and prediction (Becker, Bell, & Billington, 1987; Bell, Billington, Cicchetti, & Gibbons, 1988; Bell, Lysaker, & Milstein, 1992; Heesacker & Neimeyer, 1990; Kurtz, Morey, & Tomarken, 1993; Regehr & Marziali, 1999; Twomey, 1997; Weich, Lewis, & Mann, 1996).

Object Relations Deficits and Psychosis/Schizophrenia

Bell et al. (1992) studied the distribution of object relations deficits in persons with schizophrenia. A specific definition of "object relations deficits" was not given. The researchers did write, however, that object relations pathology is reflected in schizophrenic persons in that they "are thought to lack basic trust and have never achieved an assimilated psychic construction of the other as distinct from the self" (p. 433). The BORI, along with three other instruments, was used to

determine the distribution of object relations deficits among four subtypes of psychotic pathology: paranoid, schizoaffective, poor premorbid, and prominent negative symptoms.

Participants included 48 inpatient and outpatient subjects (45 men; 3 women) with diagnoses of schizophrenia or schizoaffective disorder. They were recruited from the Psychiatry Service of a VA Medical Center. Participants were referred by clinicians who judged them to be sufficiently stable to participate, though in need of rehabilitation. They were not paid for participation, but were given eligibility for job placement. Participants were administered the following instruments in this order: the BORI, the Premorbid Adjustment Scale (PAS), the Positive and Negative Syndrome Scale (PANSS), and the Brief Psychiatric Rating Scale (BPRS; Bell et al., 1992).

The researchers hypothesized that (a) good premorbid functioning would predict better object relations scores, particularly on SI; (b) paranoid diagnosis would relate to higher ALN scores and to lower SI scores; (c) schizoaffective diagnosis would relate to higher IA scores; (d) subjects with prominent negative symptoms of schizophrenia would have poorer object relations than subjects without prominent negative symptoms; and (e) the absence of self-reported object relations deficits might be resultant of denial of object relations difficulties due to psychotically poor insight (Bell et al., 1992).

Using Multiple Analyses of Variance (MANOVA), Bell et al. (1992) found no significant difference between the following groups: participants with schizoaffective disorder (n = 12) and those with other schizophrenic disorders (n = 27), $F(4, 34) = .91$; participants with paranoid subtype (n = 21) and all others (n = 18), $F(4, 34) = .45$; and participants with good premorbid adjustment and those with poor premorbid adjustment, whether "Childhood, $F(4, 31) = .445$; Adolescent, $F(4, 31) = .69$; Adult, $F(4, 31) = .55$; [or] General, $F(4, 31) = .23$" (p. 440).

The MANOVAs indicated that participants with prominent negative symptoms (n = 14) and those without prominent negative symptoms (n = 22) differed significantly, $F(4, 31) = 3.88$, $p < .01$. Subscale Analysis of Variance found that only IA showed a significant difference between subjects with prominent negative symptoms and those without prominent negative symptoms, IA, $F(1, 34) = 6.79$, $p < .01$. Those with prominent negative symptoms showed a lower level of Insecure Attachment.

Bell et al. (1992) recommended that those who use the BORI consider that psychotically poor insight might compromise subjects' capacity for accurate self-report, seeing that they may tend to underreport object relations difficulties. This consideration leads to the question of whether there is room for a version of the BORI that could be completed by a significant other. As Bell et al. showed, the

BORI is useful in discriminating between various types of psychosis. Given the breadth of psychosis, it would be therefore unfortunate if the BORI's usefulness were available to only those with ample psychological insight to self-report accurately. Cases certainly exist wherein a significant other is sufficiently knowledgeable and insightful regarding his or her spouse, sibling, or child to give an adequate picture of that person's object relations functioning on an "other-report" questionnaire.

Object Relations Deficits and BPD

Included in the following two sections are reviews of two studies that investigated the capacity of the BORI to discriminate borderline personality disorder (BPD) from other diagnoses. The results conflict.

Object relations deficits and BPD vs. other diagnostic groups. Bell et al. (1988) used the BORI to study whether individuals diagnosed with Borderline Personality Disorder (BPD) have object relations deficits which distinguish them from other pathologies. Bell et al. (1988) gave the BORI to 44 VA inpatients (41 men; 3 women) who met DSM-III criteria for BPD. This sample was cross-validated with a sample of 24 (2 men; 22 women) outpatients who also met DSM-III criteria for BPD, and also with 82 (73 men; 9 women) psychiatric inpatients. No significant difference was found between the means of the inpatient group and the outpatient group. Hence, a single BPD group was created.

On the basis of scores from the ALN subscale alone, BPD subjects could be distinguished from other diagnostic groups with 77% to 82% predictive accuracy. Furthermore, ALN's overall predictive accuracy was as follows: BPD versus affective disorder, 82%; BPD versus mixed, 77%; and BPD versus schizophrenic, 78% (Bell et al., 1988).

Therefore, "The object relations subscale scores [of the BORI] provide an empirically derived portrait of the quality of object relations deficits to be found in BPD. Elevated scores on Alienation proved to be identified most closely with the disorder" (Bell et al., 1988, p. 514). IA was the second most frequently elevated subscale. "The high degree of predictive accuracy achieved when the ALN subscale cut-off criterion [above 85th percentile of non-pathological norms] was used suggests that this instrument may be a useful aid in the diagnosis of this disorder" (p. 515).

Comparison of the BORI with the PAI and the MPD. Kurtz et al. (1993) compared the construct validity of three self-report measures with respect to the assessment of BPD. These measures were the Personality Assessment Inventory (PAI), the Minnesota Multiphasic Personality Inventory Personality Disorder Scales (MPD), and the BORI (scales ALN, IA, & EGC). Non-psychiatric participants included 119 undergraduate students from the psychology department at a southeastern university. For every participant, the order of test administration

was the same as that given above. Balance of men (n = 41) to women (n = 78) was uneven. Subjects ranged in age from 17 to 21, and 89% of the sample was Caucasian.

Kurtz et al.'s (1993) study possessed an adequate number of subjects (N = 119), but the sample was somewhat restricted in age range. The researchers explain the usefulness of this undergraduate college sample by stating, "there is…evidence to suggest that the prevalence of [BPD] decreases with age, and thus, college undergraduates in this age group may present at some time with [BPD]" (p. 258). Given the youth of these subjects and the phenomenon of chronic self-diagnosis when in an introductory psychological course, it is reasonable to think that these subjects responded with an "overreporting" style, thus potentially compromising the generalizability of these results to the population at large. It will be interesting to see how the BORI functions as research extends into a wider age range.

Kurtz et al. (1993) used an intercorrelation matrix to evaluate the convergent and discriminant validity of these measures, and found that the BORI scales had a significant relationship with the PAI Borderline scale (ALN, r = .55; IA, r = .63; EGC, r = .51) and with the PAI Paranoid scale (ALN, r = .49; IA, r = .49; EGC, r = .43), but not with the Anti-social scale (ALN, r = .21; IA, r = .19; EGC, r = .21).

However, the researchers reported that the BORI scales correlate more highly with the MPD Paranoid scale (ALN, $r = .49$; IA, $r = .61$; EGC, $r = .50$ [all p's $< .01$]) than with the MPD Borderline scale (ALN, $r = .22$; IA, $r = .53$; EGC, $r = .35$ [all p's $< .01$]). Kurtz et al. (1993) asserted that, because the BORI scales correlate most highly with the PAI Borderline scale—though with the MPD Paranoid scale—the BORI factors do not effectively discriminate between borderline and paranoid traits. In sum, the three measures show adequate convergent validity, but only the BORI fails to exhibit discriminant validity with respect to paranoid and anti-social personality traits.

Kurtz et al. (1993) concluded by stating that the BORI scales "appear to be somewhat nonspecific if used as indicators of BPD" (p. 264). The authors recommend caution in interpreting high scores on the BORI scales as suggestive of BPD. Because the BORI was not designed specifically as a diagnostic indicator of BPD, but instead as an assessment instrument for object relations deficits in general, this finding does not necessarily show poor validity. Also, since personality disorder traits are likely to be undifferentiated in the non-psychiatric sample (college students) included in this study, replication in a sample of outpatients with various personality disorder diagnoses would be valuable.

The BORI has indeed been used to discriminate BPD from other diagnoses (Bell et al., 1988; Kurtz et al., 1993). In particular, the Alienation scale was shown

to have the greatest discriminant validity. Further research is needed to investigate the BORI's effectiveness in discriminating other AXIS II diagnoses from one another, for example, narcissistic personality disorder versus schizoid personality disorder.

Non-Psychotic Distress and Trauma

The following three sections are reviews of studies that utilized the BORI in measuring the effect of early relationships on later psychological development, specifically as it relates to psychosocial distress, proclivity for suicide, and response to sexual assault.

Effect of early life experiences on psychosocial distress. Weich et al. (1996) utilized the BORI in a study of somatic presenters (those who consult a general practitioner with physical but no psychological problems) versus psychological presenters (those who consult a general practitioner with psychological complaints). The authors hypothesized (a) "that somatic presenters would report more difficulty with intimate relationships than psychological presenters," (p. 116) and (b) that "somatic presenters would describe their parents as less caring and more over-protective than the parents of psychological presenters" (p. 116). Participants included 301 outpatient attenders (125 men; 176 women) of general medical practice.

Two BORI subscales, ALN and IA, were used to measure potential differences between sample means. Weich et al. (1996) found psychological presenters to score significantly higher than somatic presenters on both BORI subscales. After adjusting for differences in duration and severity of morbidity, however, only the IA difference between the two groups remained.

These differences are noteworthy. Psychological presenters' scoring higher than somatic presenters might indicate less defendedness, and hence a greater ability to admit to psychological problems, assuming equal pathology between groups. Important to keep in mind is that general practitioners tend to be the initial "go to" professionals whom people consult with any of a number of complaints, including things psychological. That notwithstanding, perhaps many psychological presenters who consult a general practitioner are looking for a "quick fix" to their problems. It might be hypothesized that these persons tend to externalize responsibility. In contrast, many persons with psychological problems, persons who are ready to own and accept responsibility for their situation, would likely seek psychotherapy.

Weich et al. (1996) demonstrated the BORI's utility in that psychological presenters were found to score significantly higher than somatic presenters on the ALN and IA subscales. Further research into cultural variables is necessary, however: for example, investigation into the extent of alienation and insecure

attachment in those cultures wherein somatization of virtually all psychological problems is normal. Assuming appropriate norms, would the slightest presentation of psychological problems in these cultures indicate significant alienation and/or insecure attachment?

Childhood maltreatment and suicidal behavior in women. Twomey (1997) investigated the quality of object relations of suicidal women who report a history of childhood maltreatment. Five types of childhood maltreatment (sexual abuse, physical abuse, emotional abuse, emotional neglect, and physical neglect) were examined. The aims of this study were (a) to investigate "the correlations among childhood maltreatment, object relations, and suicidal behaviors in a sample of predominantly low income African American women; and (b) to test a proposed mediational model of the relations among these variables" (p. 45).

The sample consisted of 159 low income African American women who sought services from a local, public hospital. The sample was unequally divided between groups; 53 (who had made prior suicide attempts) comprised the experimental group, and 106 were controls. Age range was large (18-64; M = 30.49, SD = 9.72), but the investigator explained that this range would not prove confounding because potential within group variability would apply to both experimental and control groups (Twomey, 1997).

Both experimental and control participants completed the following in this order: background information, the Childhood Trauma Questionnaire (CTQ), the BORI, and the Blatt Object Relations Inventory (ORI). Questionnaires were administered orally, due to the high prevalence of illiteracy among the women who participated (Twomey, 1997).

Twomey (1997) found that every BORI subscale significantly correlated with all five types of childhood maltreatment. Additionally, over one-third of the total sample manifested pathological elevations (above the 85% cut off) on ALN (43%), IA (37%), and SI (37%). Furthermore, greater than two-thirds of the entire sample manifested pathological evaluations on EGC (67%). Differences between the experimental and control group were also marked. Of the experimental group, 56% to 91% had pathological scores on all four BORI subscales, as compared to only 19% to 56% of the control group. Those women who attempted suicide reported a significantly greater degree of object relations pathology, as measured by the four BORI subscales, than did the control group: ALN, $F(1, 155) = 70.44$; IA, $F(1, 155) = 79.10$; EGC, $F(1, 155) = 30.03$; and SI, $F(1, 155) = 17.72$; all p's $< .001$.

With respect to object relations variables that were hypothesized to mediate between childhood maltreatment and later suicide attempts, IA proved to be a mediating variable between emotional abuse and suicide attempt status. ALN,

however, provided the most robust mediation, when compared to the ORI subscales. "The object relations variable, BORI alienation, was the only variable found to fully mediate the associations between each of the five types of childhood maltreatment and suicide attempt status" (Twomey, 1997, p. 87). Moreover,

> The results indicated that the alienation scale of the BORI was the most potent of the hypothesized mediators in that it fully mediated the associations between all five types of reported childhood maltreatment examined (sexual, physical, and emotional abuse, and emotional and physical neglect) and suicide attempt status. (Twomey, 1997, p. 88)

According to this study, the BORI indeed proved helpful in the measurement of object relations deficits in low income African American women who have attempted suicide. Of greater utility, however, would be an investigation into the employment of the BORI as a predictor of the proclivity for attempted suicide. Further research is needed to discover a possible profile for such proclivity so as to increase the possibility of circumventing the attempts of persons (irrespective of gender or race) to take their own lives.

Object relations and response to sexual assault. Regehr and Marziali (1999) studied women's responses to rape. They posited that, though multiple factors are involved, relational capacity (as measured by the BORI) provides a foundational construct for understanding post-trauma response. Participants included 71 women

who were victims of rape at least one year prior to the study. Post-rape length of time ranged from 1 year to 10 years (M = 4.6 years). Age range was 17 to 47 years (M = 29.1).

Regehr and Marziali (1999) employed the BORI, along with two symptom status scales—the Posttraumatic Stress Symptom Scale (PSS) and the Beck Depression Inventory (BDI)—and found their hypothesis to be confirmed. That is, "relational capacity is a significant factor in explaining persistent symptomatic response to sexual assault" (p. 621). Significant correlations were found between the BORI and the PSS (ALN, r = .41; IA, r = .39; EGC, r = .43; and SI, r = .28; all p's < .05), and between the BORI and the BDI (ALN, r = .63; IA, r = .58; EGC, r = .66; and SI, r = .44; all p's < .05). Essentially, "higher scores on both of the symptom scales are associated with vulnerabilities in interpersonal relationships as captured in Bell's measure of relational capacity" (p. 621).

Regehr and Marziali (1999) proposed that negative early life relational experiences are associated with negative responses to later life events. Using regression analyses, they found this proposition to have been partially supported. Two BORI subscales, ALN ($ß$ = .30, p < .001) and EGC ($ß$ = .25, p < .01), "explained significant portions of the variance in the symptom measures scores after all other sub-scales were entered into the model" (p. 622).

Bell (1995) indicated that high scores on both ALN and EGC suggest an intense mistrust of others' motivations, a profound sense of hopelessness, and an acquiescence to one's own perceived incompetence in establishing even surface level relationships. Based upon Regehr and Marziali's (1999) findings, it appears that high scores on both ALN and EGC predict, in part, maladaptive responses to traumatic events. It is possible that, for these victimized women, the experience of sexual trauma may have galvanized what they already believed to be true; that is, that they are helpless and that people, perhaps men in particular, are not to be trusted. The BORI, then, might prove beneficial as an instrument used in the initial assessment of rape victims. Object relations information gained could guide treatment interventions.

Impulse Difficulties/Eating Disorders

The following two sections are reviews of studies that employed the BORI in the investigation of the relational components of eating disorders.

Object relations deficits in bulimic college women. Becker et al. (1987) investigated ego function deficits as they relate to bulimic college women. These investigators began with these three hypotheses: (a) that purging and restricting bulimic women have more severe object relations deficits than non-bulimic women; (b) that a linear relationship exists between severity of type of eating disorder and severity of object relations disturbance; and (c) that the IA and SI

subscales of the BORI will manifest those dimensions of object relations disturbance relevant to eating behavior.

Participants included 547 women (M age = 19.45; SD = 4.53) from a midwestern university. These women completed two self-report measures, the Bulimia Inventory and the BORI. Upon completion of the Bulimia Inventory, subjects were placed into one of these four categories, listed in order from lowest to highest level of eating disturbance: no eating disorder, problematic binge eating, restricting bulimia, and purging bulimia (Becker et al., 1987).

Using ANOVA, Becker et al. (1987) found significant group mean differences on IA between bulimic and non-bulimic groups, $F(1, 355) = 8.21$, $p < .005$, whereas significant group differences were not found for the BORI subscales that reflect other types of object relations pathology. It appears that, not only is IA sufficient to determine differences between groups, it can also distinguish degrees of eating disorder pathology: "When eating behavior groups were ranked by severity of eating disturbance (normal, binging, restricting, purging), a significant linear trend was found in subscale means for IA (-.27, -.02, .12, .42), $F(1, 534) = 13.68$, $p < .001$; and EGC (-.23, -.11, -.04, .00), $F(1, 534) = 3.97$, $p < .05$" (p. 94).

According to Becker et al. (1987), the BORI is useful in supporting the object relations theory that associates bulimia with conflictual desires for merger and autonomy, for the IA subscale in particular "signifies fears of abandonment

and lack of autonomy in relationships" (p. 94). The SI subscale of the BORI may have proved helpful as well. Although bulimic and non-bulimic groups did not differ significantly on SI, this "non-finding" might indeed shed further light on the inner world of the bulimic. The authors speculated that, because bulimics and non-bulimics differed significantly on IA but not on SI, perhaps their social anxiety, reported on the SI subscale, was more consequent of their fears of relational pain and rejection, and less consequent of their fears of social incompetence.

Also worthy of note is that the hypothesized linear relationship between severity of eating disorder and severity of object relations disturbance was confirmed. Again, IA proved the most robust scale of the BORI for this disorder. The same linear trend was noted in EGC as well, though to a lesser degree.

Object relations and social cognitive correlates of eating disorder. Heesacker and Neimeyer (1990) investigated the association between object relations disturbances and eating disorder. Participants included 183 women (modal age = 19.4) who completed the BORI, the repertory grid, the Eating Disorder Inventory (EDI), and the Eating Attitudes Test (EAT). The repertory grid, the BORI, the EDI, and the EAT were administered to test the hypothesis that "women with higher levels of eating disordered behavior were expected to have more severe object relations disturbances, particularly along the dimension of Insecure Attachment" (p. 421).

Using Hierarchical Multiple Regression, Heesacker and Neimeyer (1990) found that IA and SI contributed significantly to the prediction of Drive for Thinness (as measured by the EDI), IA, $F(1, 161) = 13.31$ and SI, $F(1, 161) = 8.31$, p's $< .01$; and EAT scores, IA, $F(1, 161) = 4.15$ and SI, $F(1, 161) = 4.54$, p's $< .05$. According to Heesacker and Neimeyer, therefore, the BORI is a reliable instrument for identifying the presence and severity of eating disorder, when utilized in conjunction with other instruments, such as the EAT and EDI, specifically designed to measure such pathology.

Object relations therapists hold to the primacy of internal self-object representations in the presence and degree of psychopathology. Although there are few reliable instruments that measure the influence of object relations in psychopathology, researchers have found the BORI a versatile tool for diagnosis and prediction. With respect to psychosis, Bell et al. (1992) studied the distribution of object relations deficits in persons with schizophrenia, and found the BORI useful in discriminating between subjects with prominent negative symptoms and those without prominent negative symptoms. With respect to BPD, both Bell et al. (1988) and Kurtz et al. (1993) employed the BORI to investigate its discriminant validity. According to Bell et al. (1988), based upon the ALN subscale alone, BPD subjects could be distinguished from other diagnostic groups with 77% to 82% predictive accuracy. Kurtz et al. (1993), however, had less

favorable results in a normal college sample. When compared with the PAI and MPD, the BORI exhibited the least discriminant validity as regards borderline versus paranoid and anti-social personality traits.

Concerning non-psychotic distress and trauma, Weich et al. (1996) used the BORI in a study comparing somatic versus psychological presenters. They found psychological presenters to score significantly higher on ALN and IA than somatic presenters, though only the IA difference remained after adjusting for duration and severity of morbidity. Twomey (1997) investigated the quality of object relations of suicidal women reporting a history of childhood maltreatment, and found that all four BORI subscales significantly correlated with all five types of childhood maltreatment. Alienation was "the most potent…in that it fully mediated the associations between all five types of reported childhood maltreatment examined (sexual, physical, and emotional abuse, and emotional and physical neglect) and suicide attempt status)" (p. 88). Regehr and Marziali (1999) studied women's responses to rape. They proposed that negative early life relational experiences are associated with negative responses to later life events. Using the ALN and EGC subscales of the BORI, their hypothesis was confirmed. Namely, relational capacity, as determined by early childhood experience, partially explains persistent symptomatic response to sexual assault.

Becker et al. (1987) and Heesacker and Neimeyer (1990) used the BORI to investigate the relationship between object relations and eating disorders. Becker et al. (1987) utilized the BORI to measure ego function deficits as they relate to bulimic college women. Out of all four BORI subscales, only the Insecure Attachment subscale revealed significant group mean differences between bulimic and non-bulimic groups. Furthermore, IA was able to distinguish degrees of eating disorder pathology. According to Becker et al., the BORI—particularly the IA subscale—is useful in supporting the object relations theory that associates bulimia with conflictual desires for merger and autonomy. Heesacker and Neimeyer (1990) also used the BORI to investigate the association between object relations disturbances and eating disorder, and found the BORI to be a reliable instrument for the prediction of the presence and severity of eating disorder when utilized in conjunction with other instruments designed to measure such pathology.

Conclusion and Suggestions for Future Research

This writer was interested in reviewing research on the BORI, an instrument designed to provide empirical support for object relations theory. Numerous studies demonstrated the BORI to have a wide range of usefulness. Bell et al. (1986) gave the BORI to community active adults, undergraduate students,

and psychiatric inpatients and outpatients, some of whom where diagnosed with BPD. Factor analysis suggested the four subscale names currently in use: Alienation, Insecure Attachment, Egocentricity, and Social Incompetence. Though the Bell et al. study was intended as an introduction to the BORI in terms of its reliability, validity, and factorial invariance, it yielded significant results as regards the prediction of psychopathology. They found that borderline patients scored the highest on ALN; borderline patients and other AXIS II patients scored highest on IA, though schizophrenic patients had very low scores; borderline, mixed, and schizophrenic patients scored highest on EGC; and pathological groups were indistinguishable on SI.

Any measure of object relations must perforce be effective in assessing the quality of interpersonal relatedness. Burns and Viglione (1996, 1997) found that the quality of interpersonal relatedness, as measured by the BORI, is related to Rorschach responses which have to do with human representations. Deason (1998) used the BORI to investigate the relationships among family role behavior and family functioning, interpersonal attachment, and gender. He found significant negative correlations between ALN and Heros and between ALN and Mascots. In addition, he found significant positive correlations between ALN and Scapegoats and ALN and Lost Children. Deason's findings indicate that the BORI, especially

the ALN subscale, has a significant relationship with familial roles and behavior patterns.

As shown above, the BORI is helpful in assessing interpersonal relatedness. Research has indicated, however, that the BORI is also helpful in discerning the human experience of relationship between self and God. Hall and Edwards (1996) employed the BORI as a measure of object relations against which to test the construct validity of their newly developed SAI and found it useful in discriminating among relational constructs having to do with God. Hall et al. (1998) examined religious functioning from an object relations perspective and found the BORI to be extremely effective in highlighting a link between religious and psychological functioning. They found spiritual maturity to be positively associated with level of object relations, as measured by the BORI. In addition, they found that three BORI subscales (ALN, EGC, and IA) significantly correlated with one's awareness of God, and that all four BORI subscales significantly correlated with one's quality of relationship with God.

Moreover, the BORI's usefulness in discriminating among relational constructs having to do with God could prove beneficial in the context of Christian based psychotherapy or spiritual direction. One's relationship with God is influential in all areas of life, especially those areas having to do with personal interaction (Hall & Edwards, 1996). Better insight into one's style of relating to

God might help to improve interpersonal relationships. Because the same psychological processes are likely at work in relationship with God and in relationship with other persons (Benner, 1988), that insight might help to improve how we interact with others. In addition, use of the BORI in this context may be helpful to the numerous psychotherapists better trained to deal with object relations constructs than with spiritual constructs.

Peterson (1999) studied the relationship of birth order to God image and object relations functioning. He found relationships between BORI factors and religious involvement to differ between firstborns and laterborns. Tisdale (1997) explored the relationship between level of object relations development and experience of self and God. Employing Jewish, Muslim, and Protestant participants, she found the BORI useful in differentiating relational patterns, personal experience, and expectations of God from one faith group to the next. Across Jewish, Muslim, and Protestant faith groups, however, persons differed on their BORI scores and their measured experience of God. Further research into these differences would prove valuable for therapy in determining what relational patterns and experiences of God might be expected of clients from these religious groups.

There exist few reliable instruments that measure the influence of object relations in psychopathology. Not only does the BORI measure the influence of

object relations in psychopathology, it shows itself an effective tool in the diagnostic process (Becker et al., 1987; Bell et al., 1988; Bell et al., 1992; Heesacker & Neimeyer, 1990; Kurtz et al., 1993; Regehr & Marziali, 1999; Twomey, 1997; Weich et al., 1996). Regarding psychosis Bell et al. (1992) studied the distribution of object relations deficits in persons with schizophrenia. They found the BORI useful in differentiating subjects with prominent negative symptoms from those without prominent negative symptoms.

With respect to BPD, Bell et al. (1988) and Kurtz et al. (1993) utilized the BORI to investigate its discriminant validity. Bell et al. (1988) found that, based on the ALN subscale alone, borderline patients could be distinguished from other diagnostic groups with 77% to 82% accuracy. Kurtz et al. (1993) had less favorable results in a normal college sample. When compared with the PAI and MPD, the BORI showed the least discriminant validity regarding borderline versus paranoid and anti-social personality traits. Although the ALN subscale was able to distinguish borderline patients from other diagnostic groups with 77% to 82% accuracy, further research is needed. For example, how effective is the BORI in discriminating other AXIS II diagnoses from one another, say narcissistic personality disorder versus schizoid personality disorder?

Weich et al. (1996) employed the BORI in a study comparing somatic versus psychological presenters. They found psychological presenters to score

significantly higher on ALN and IA than somatic presenters. Further research into cultural variables is necessary, however: for example, investigation into the extent of alienation and insecure attachment in those cultures wherein somatization of virtually all psychological problems is normal. Assuming appropriate norms, would the slightest presentation of psychological problems in these cultures indicate significant alienation and/or insecure attachment?

Twomey (1997), investigating the quality of object relations of suicidal women, found that all four BORI subscales significantly correlated with all five types of childhood maltreatment. According to Twomey, the BORI proved helpful in the measurement of object relations deficits in low income African American women who have attempted suicide. Of greater utility, however, would be an investigation into the employment of the BORI as a predictor of the proclivity for attempted suicide. Further research is needed to discover a possible profile for such proclivity so as to increase the possibility of circumventing the attempts of persons (irrespective of gender or race) to take their own lives.

Bell (1995) indicated that high scores on both ALN and EGC suggest an intense mistrust of others' motivations, a profound sense of hopelessness, and an acquiescence to one's own perceived incompetence in establishing even surface level relationships. Regehr and Marziali (1999) used the BORI as they studied women's responses to rape. Based upon their findings, it appears that high scores

on both ALN and EGC predict, in part, maladaptive responses to traumatic events. It is possible that, for victimized women, the experience of sexual trauma may have galvanized what they already believed to be true; that is, that they are helpless and that people, perhaps men in particular, are not to be trusted. The BORI, then, might prove beneficial as an instrument used in the initial assessment of rape victims. Object relations information gained could guide treatment interventions.

Becker et al. (1987) and Heesacker and Neimeyer (1990) employed the BORI to investigate the relationship between object relations and eating disorders. Becker et al. (1987) utilized the BORI to measure ego function deficits as they relate to bulimic college women. According to Becker et al., the BORI—particularly the IA subscale—is useful in supporting the object relations theory that associates bulimia with conflictual desires for merger and autonomy. Heesacker and Neimeyer (1990) also used the BORI to investigate the association between object relations disturbances and eating disorder, and found the BORI to be a reliable instrument for the prediction of the presence and severity of eating disorder when utilized in conjunction with other instruments designed to measure such pathology.

In closing, the BORI is a reliable and versatile instrument, whether used to measure interpersonal relatedness and religious functioning, to employ as an aid in

the diagnosis of schizophrenia, BPD, and eating disorders, or to utilize in the prediction of suicidal behavior. Along with the suggestions offered above, future research might include studying the BORI's applicability with a greater age range, specifically adolescents. Given its potential as a predictor of maladaptive response to trauma, the BORI might well be given to teenage victims of assault, abuse, or other traumatic events and relationships.

REFERENCES

Becker, B., Bell, M., & Billington, R. (1987). Object relations ego deficits in bulimic college women. Journal of Clinical Psychology, 43, 92-95.

Bell, M. D. (1995). Bell Object Relations and Reality Testing Inventory (BORRTI): Manual. Los Angeles: Western Psychological Services.

Bell, M. D., Billington, R., & Becker, B. (1986). A scale for the assessment of object relationships: Reliability, validity, and factorial invariance. Journal of Clinical Psychology, 42, 733-741.

Bell, M., Billington, R., Cicchetti, D., & Gibbons, J. (1988). Do object relations deficits distinguish BPD from other diagnostic groups? Journal of Clinical Psychology, 44, 511-516.

Bell, M., Lysaker, P., & Milstein, R. (1992). Object relations deficits in subtypes of schizophrenia. Journal of Clinical Psychology, 48, 433-444.

Benner, D. G. (1988). Psychotherapy and the spiritual quest. Grand Rapids, MI: Baker Book House.

Burns, B., & Viglione, D. J., Jr. (1996). The Rorschach Human Experience variable, interpersonal relatedness, and object representation in nonpatients. Psychological Assessment, 8, 92-99.

Burns, B., & Viglione, D. J., Jr. (1997). The Rorschach Human Experience variable, interpersonal relatedness, and object representation in nonpatients: Correction. Psychological Assessment, 9, 82.

Cashdan, S. (1988). Object relations therapy: Using the relationship. New York: W. W. Norton.

Deason, D. M. (1998). A systemic look at the self: The relationship between family organization, interpersonal attachment, and identity. Journal of Social Behavior and Personality, 13, 465-479.

Feist, J., & Feist, G. J. (1998). Theories of personality (4th ed.). Boston: McGraw-Hill.

Hall, T. W., Brokaw, B. F., Edwards, K. J., & Pike, P. L. (1998). An empirical exploration of psychoanalysis and religion: Spiritual maturity and object relations development. Journal for the Scientific Study of Religion, 37, 303-313.

Hall, T. W., & Edwards, K. J. (1996). The initial development and factor analysis of the Spiritual Assessment Inventory. Journal of Psychology & Theology, 24, 233-246.

Hamilton, N. G. (1990). Self and others: Object relations theory in practice. Northvale, NJ: Jason Aronson.

Heesacker, R. S., & Neimeyer, G. J. (1990). Assessing object relations and social cognitive correlates of eating disorder. Journal of Clinical Psychology, 37, 419-426.

Jones, S. L., & Butman, R. E. (1991). Modern psychotherapies: A comprehensive Christian appraisal. Downers Grove, IL: InterVarsity Press.

Kurtz, J. E., Morey, L. C., & Tomarken, A. J. (1993). The concurrent validity of three self-report measures of borderline personality. Journal of Psychopathology & Behavioral Assessment, 15, 255-266.

Lyddon, W. J., Bradford, E., & Nelson, J. P. (1993). Assessing adolescent and adult attachment: A review of current self-report measures. Journal of Counseling & Development, 71, 390-395.

Peterson, D. L. (1999). The relationship of birth order to religious experience and object relations functioning. (Doctoral dissertation, Biola University, La Mirada, CA, 1999). Dissertation Abstracts International, 60 (06), 2956B.

Regehr, C., & Marziali, E. (1999). Response to sexual assault: A relational perspective. Journal of Nervous & Mental Disease, 187, 618-623.

Smithson, J. H., & Howard, B. M. (1973). Perspectives on relational psychopathology. Elmsford, NY: Pergamon Press.

Tisdale, T. C. (1997). A comparison of Jewish, Muslim, and Protestant faith groups on the relationship between level of object relations development and experience of God and self. (Doctoral dissertation, Biola University, La Mirada, CA, 1997). Dissertation Abstracts International, 58 (09), 5144B.

Twomey, H. B. (1997). Childhood maltreatment, object relations and suicidal behavior in women. (Doctoral dissertation, Miami University, Miami, FL, 1997). Dissertation Abstracts International, 58 (10), 5659B.

Weich, S., Lewis, G., & Mann, A. (1996). Effect of early life experiences and personality on the reporting of psychosocial distress in general practice: A preliminary investigation. British Journal of Psychiatry, 168, 116-120.

VITA

NAME:

Joseph Wm. Hansen

EDUCATION:

Rosemead School of Psychology Clinical Psychology	Psy.D.	(Cand.)
Rosemead School of Psychology Clinical Psychology	M.A.	1998
Northwestern College Psychology	B.S.	1994

INTERNSHIP:

University of Virginia Department of Student Health Center for Counseling and Psychological Services Charlottesville, VA	2001 - 2002

PRACTICA:

VA Healthcare System Long Beach, CA Inpatient Program	1999 - 2000
Biola Counseling Center La Mirada, CA Outpatient Program	1998 - 1999
California High School Whittier, CA School Practicum	1997 - 1998

EMPLOYMENT:

Olive Crest Family Services Santa Ana, CA Sexual Abuse Therapist	2000 - 2001